Linear enamel hypoplasias and premature mortality: negative health consequences of early childhood physiological stress.

ABSTRACT

The Developmental Origins of Health and Disease hypothesis asserts that there is a relationship between early life stressors and adult health. In this study, linear enamel hypoplasias (LEH), which are considered to be a non-specific indicator of physiological stress, are used to find out if there is a relationship between LEH and premature mortality in a human skeletal sample. Analyses were performed in the mandibular canine of 145 male adult individuals of an urban population from the 19th and first half of the 20th century, from an identified human skeletal collection. Cause of death, socio-economic status of the individuals (SES), inferred by their occupation and year of birth were the variables tested as possible confounders in the relationship between the presence of LEH and premature mortality.

There was found a statistical significant difference in average age at death between individuals with and without LEH. The socio-economic status of the individuals with LEH does not seem to affect their age at death. When analyzing the individuals according to their cause of death, it is only in the group of individuals who died from infectious diseases that there is a statistical significant difference in average age at death between individuals with and without LEH.

Key-words: Linear enamel hypoplasia, developmental origins of health and disease, mortality, socio-economic status, infectious diseases, non-infectious diseases.